

ABSTRACT OF THE DISCLOSURE

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A system used with a virtual device inputs or transfers information to a companion device, and includes two optical systems OS1, OS2. In a structured-light embodiment, OS1 emits a fan beam plane of optical energy parallel to and above the virtual device. When a user-object penetrates the beam plane of interest, OS2 registers the event. Triangulation methods can locate the virtual contact, and transfer user-intended information to the companion system. In a non-structured active light embodiment, OS1 is preferably a digital camera whose field of view defines the plane of interest, which is illuminated by an active source of optical energy. Preferably the active source, OS1, and OS2 operate synchronously to reduce effects of ambient light. A non-structured passive light embodiment is similar except the source of optical energy is ambient light. A subtraction technique preferably enhances the signal/noise ratio. The companion device may in fact house the present invention.

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